

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.
(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name "CATO"	Official Number 169390	Nationality and Port of Registry BRITISH BRISTOL	Gross Tonnage APPROX 940 939	Date of Build 1946	Port of Survey GOOLE
Moulded Dimensions: Length 200'-0" Breadth 31'-3" Depth 13'-11" TO UPPER DECK 18'-11" TO R.Q.D.K.				Date of Survey DURING CONSTRUCTION	
Moulded displacement at moulded draught = 85 per cent. of moulded depth 1476 tons				Surveyor's Signature L. J. Palmer	
Coefficient of fineness for use with Tables .697				Particulars of Classification 100A1 (CONTEMPLATED)	

DEPTH FOR FREEBOARD (D). Moulded depth ... 13.97 Stringer plate029 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ NONE Depth for Freeboard (D) = 13.946	DEPTH CORRECTION. (a) Where D is greater than Table depth (D-Table depth) R = $(13.95-13.36) \times 1.542 = +.91$ (b) Where D is less than Table depth (if allowed) (Table depth-D) R = If restricted by superstructures	ROUND OF BEAM CORRECTION. Moulded Breadth (B) 31.25 Standard Round of Beam = $\frac{B \times 12}{50} = 7.50$ Ship's Round of Beam = 7.75 Difference .25 Restricted to Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.25}{4} \times .2323 = -.01$
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DEDUCTION FOR SUPERSTRUCTURES.					
	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	✓				
" overhang ...	✓				
R.Q.D. enclosed SURG 134-38 CENTRE 136-21	135.60	135.60	5'-0"	✓	135.60
" overhang ...					
Bridge enclosed ...	✓				
" overhang aft ...	✓				
" overhang forward ...	✓				
F'cle enclosed OPEN ...	17.95	17.95	7'-0"	✓	17.95
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	153.55	153.55			153.55

Standard Height of Superstructure 6.0
" " R.Q.D. 3.67
Deduction for complete superstructure 26.05
Percentage covered $\frac{S}{L} =$
" " $\frac{S_1}{L} =$
" " $\frac{E}{L} =$
Percentage from Table, Line A. 71.32 (corrected for absence of forecastle (if required))
Percentage from Table, Line B. (corrected for absence of forecastle (if required))
Interpolation for bridge less than .2L (if required)
Deduction = 26.05 × .7132 = -18.58

SHEER CORRECTION.							
Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S
A.P. ...	30.05	1		30.05	+15.96 30.00	45.96	1
1/4 L from A.P. ...	13.37	4		53.48	13.50	20.45	4
2/4 L " ...	3.305	2		6.61	3.50	5.06	2
Amidships ...	-	4		-	NIL	-	4
2/4 L from F.P. ...	6.61	2		13.22	7.00	7.00	2
1/4 L " ...	26.74	4		106.96	27.00	27.00	4
F.P. ...	60.10	1		60.10	60.00	60.00	1
Total ...				270.42			319.88

Mean actual sheer aft =
Mean standard sheer aft =
Mean actual sheer forward =
Mean standard sheer forward =
Length of enclosed superstructure forward of amidships = 17.88
" " aft of " = .5

Actual height of R.Q.D. = 5.00
Standard " " " = 3.67
1.33 = 15.96"

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{49.46(.75 - .3841)}{18 \times 3659} = -1.01$
If limited on account of midship superstructure. ✓

If limited to maximum allowance of 1 1/2 ins. per 100 ft. ✓

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 18.95 Summer freeboard = 5.39 Moulded draught (d) = 13.56 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 3.39 = 3 1/2" Addition for Winter North Atlantic Freeboard (if required) = 5 1/2"	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta =$ Tons per inch immersion at summer load water line T = Deduction = $\frac{\Delta}{40 T}$ inches = 3 1/2	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{697+68}{1.36} = \frac{1.377}{1.36}$ Depth Correction91 Deduction for superstructures ... 18.58 Sheer correction ... 1.01 Round of Beam correction01 Correction for Thickness of Deck amidships ... 60.00 Other corrections, scantlings, etc. ... 60.91 19.60 + 41.31 Summer Freeboard = 64.73
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-			
Tropical Fresh Water Line above Centre of Disc ...	6 1/4"	Tropical Fresh Water Freeboard ...	5'-4 3/4"
Fresh Water Line " " ...	3 1/2"	Fresh Water " " ...	4'-10 1/2"
Tropical Line " " ...	2 3/4"	Tropical " " ...	5'-1 1/4"
Winter Line below " " ...	3 1/2"	Winter " " ...	5'-2" (LIMITED)
Winter North Atlantic Line " " ...	5 1/2"	Winter North Atlantic " " ...	5'-8 1/4"

A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.

Trade of ship FOREIGN-GOING

Names of sister ships 'INO' (HULL RPT No 2492)

Builder's name and yard number GOOLE SHIPBUILDING & REPAIRING CO LTD, YARD No 442.

Owners BRISTOL STEAM NAVIGATION CO LTD.

Fee £ 8 : 0 : 0



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